

# SAMUEL SOMMERER

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## EDUCATION

### University of Southern California

Bachelor of Science | Computer Science | **GPA: 3.96** | Junior Standing

*Los Angeles, CA*

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## EXPERIENCE

### Undergraduate Researcher | ICAROS Lab | Viterbi School of Engineering

**Sep 2020-Present**

- Implement novel machine learning algorithms to improve human-robot interaction
- Create tutorials to showcase key features of novel machine learning library
- Increased algorithm speed by three times using Numba library

### Undergraduate Researcher | Chiang Lab | Keck School of Medicine

**Aug 2019-Sep 2020**

- Authored Python and Slurm scripts to process big data to calculate polygenic risk scores
- Integrated scripts with High-Performance Computing clusters, reducing runtime by more than 50%

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## PROJECTS

### Competitor | Data Science Competition

**Jun 2020-Aug 2020**

- Initiated, recruited and led a team of four USC students
- Trained deep learning models to detect and draw bounding boxes around wheat heads in images
- Organized study sessions, taught object detection concepts and structured deliverables among teammates
- Performed data augmentation to generate thousands of new images for training and testing data sets

### Competitor | HackSC | LA Hacks

**Jan|Apr 2020**

- Created a website to help detainees access legal representation
- Designed a mobile social media app focused on location-based event sharing

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## LEADERSHIP & INVOLVEMENT

### Technical Lead & E-board Member | Developer Student Club @ USC

**Sep 2020-Present**

- Develop machine learning curriculum for engineering and non-technical student audiences
- Conduct lectures and training workshops using Google cloud-based technologies

### Editor | Illumin Magazine (USC's premier engineering online magazine)

**Aug 2020-Present**

- Review and recommend over a hundred submissions for publication while providing editorial feedback
- Expand magazine's visibility and increase readership by promoting to student groups

### Project Team Member | Center for AI in Society Student Branch (CAIS++)

**Sep 2020-Present**

- Modeling natural language processing in resume reviews to reduce bias
- Perform Principal Component Analysis and calculated Relational Inner Product Association of word embeddings
- Collaborate with top USC undergraduate ML talents to address various social issues leveraging AI

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## SKILLS

- **Programming:** C/C++, Python, Java, Bash, MySQL, JavaScript, HTML
- **Libraries/Frameworks:** TensorFlow, Keras, Numpy, Pandas, Matplotlib, Scikit-learn, Spring, RESTful APIs
- **Tools:** Kali Linux, Linux, Git, VirtualBox, Metasploit, High-Performance Computing, Colab, Docker, Tomcat
- **Areas:** Cyber Security, Algorithms, Data Structures, Artificial Intelligence, Machine Learning, Clustering

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## HONORS & AWARDS

- W.V.T. Rusch Engineering Honors Program | Undergraduate Research Associate Program Grant Recipient
- USC Presidential Scholarship | Dean's List | National Merit Scholar